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February 8, 2018

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

**Re: Syros Pharmaceuticals, Inc.
Registration Statement on Form S-3 (File No. 333-222634)
Request for Acceleration**

Ladies and Gentlemen:

Pursuant to Rule 461 promulgated under the Securities Act of 1933, as amended, Syros Pharmaceuticals, Inc. (the "**Registrant**") hereby requests acceleration of the effective date of its Registration Statement on Form S-3 (File No. 333-222634), so that it may become effective at 4:00 p.m. Eastern time on February 12, 2018, or as soon thereafter as practicable or at such later time as the Registrant may orally request via telephone call to the staff.

Very truly yours,

SYROS PHARMACEUTICALS, INC.

By: /s/ Gerald E. Quirk

Name: Gerald E. Quirk

Title: Chief Legal & Administrative Officer


